# FACT SHEET FOR NPDES PERMIT WA0041971

# OCEAN GOLD SEAFOODS INC.

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## INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Revised Code of Washington (RCW) 90.48 which defines the Department of Ecology's (the Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits [Chapter 173-220 Washington Administrative Code (WAC)] and water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least 30 days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

This fact sheet has been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D—Response to Comments.

| GENERAL INFORMATION | |
|---|---|
| Applicant | Ocean Gold Seafoods Inc. |
| Facility Name and Address | 1804 Nyhus Street<br>Westport, Washington |
| Type of Facility | Fish and Shellfish Processing |
| SIC Code | 2092 |
| Discharge Location | Water Body name: Grays Harbor<br>Latitude: 46°54’25”N Longitude: 124°06’02”W |
| Water Body ID Number | WA-10-22-03 |

## BACKGROUND INFORMATION

### *DESCRIPTION OF THE FACILITY*

#### HISTORY

The first permit for this facility was issued on April 17, 1996. This permit was renewed on November 1, 2000, modified on May 30, 2003 and modified again on July 21, 2004. A new treatment plant was completed in and began operation in June 2002.

#### INDUSTRIAL PROCESS

Based on the application submitted by the Permittee on May 28, 2004, Merino's Seafood processes the following products:

- Dungeness Crab – From mid-December through February, live crab are received at the dock and processed into whole crab, cluster packs, and picked crabmeat. From mid-March through September, activity is mostly limited to shipping of live crab. When the market is favorable, crab frozen in the December-February period is processed for sale in the March-September period. Solid waste is recycled to a chitin extraction plant or sent to a rendering plant. Cooking water and washing water are treated and discharged.
- Pacific Whiting (hake)– Pacific Whiting are caught in the period May-October. These fish are mechanically headed and gutted. They are then either frozen and shipped whole or filleted, frozen, and shipped. Solid waste is sent to a rendering plant. Washing water is treated and discharged.

Production, times of work, and staff employed depends on the wild population of seafood and so is quite variable. The National Marine Fisheries Service controls seasonal variation. The site is crowded, consisting of a leased land area of only 3,000 square feet covered by a two-story building. A dock extends out over the boat basin. This is a permit renewal.

The Permittee has reduced water use to the minimum compatible with product quality.

Waste water treatment is as follows:

Wastewater from the plant or from boat holds is routed through rotary screens to remove coarse particles. From the screens, the waste water is treated with flocculant and thoroughly mixed. This wastewater is then routed to an air flotation tank where fine particulates are skimmed off. Screenings and skimmings are dumped in a truck which conveys them to a rendering plant.

#### DISCHARGE OUTFALL

The outfall is a pre-existent concrete vault at Firecracker Point at the south entrance to the Westport Boat Basin. This vault has four 24-inch diameter pipes extending out into the Elk River channel in Grays Harbor. An approved mixing zone study has been done for this outfall.

### *PERMIT STATUS*

The previous permit for this facility was issued on September 14, 2000. The previous permit placed effluent limitations on biochemical oxygen demand, total suspended solids, oil and grease, pH, and fecal coliform bacteria.

An application for permit renewal was submitted to the Department on May 28, 2004, and accepted by the Department on August 25, 2004.

*SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT*

The facility last received an inspection on June 29 and 30th 2003. To evaluate the performance of the Permittee it is necessary to understand the products and seasons that affect the waste load. The three significant waste streams discharging from Merino's Seafood come from processing of fresh-caught crab, the reprocessing of frozen crab, and the processing of pacific whiting. The crab harvest season occurs in the winter. Crab cooking water is higher in pollutants than the wastewater from processing frozen crab, although the categorical limits are the same for both processes. The mechanical processing of pacific whiting, begun in July of 1997, introduced a highly polluted waste stream that caused difficulties until the present treatment plant was completed in June of 2002. Present reporting performance is correct. A tabulation of DMR results is shown in Appendix C. In spite of the improved performance of the new treatment plant, fecal coliforms have been high with numerous instances of fecal coliforms exceeding the maximum count possible for the laboratory method. The permit as written was not in accordance with Ecology policy or regulation. This error was corrected in a permit modification issued on may 30, 2003, when end of pipe water quality based limits of 14 #/100 ml average and 43 #/100ml maximum were replaced with AKART based limits of 200 #/100 ml average and 400 #/100 ml. Although the limits were modified, fecal coliforms are still a major problem with this discharge. A summary of permit violations for BOD, O&G, and TSS is shown below:

**Maximum Day Permit Violations Table**

| Date | BOD | TSS | O&G | Fecal Coliforms* |
|---|---|---|---|---|
| Aug. 2001 | | | | x |
| Jan. 2002 | | | | x |
| Feb. 2002 | | | | x |
| May 2002 | | | | x |
| Aug. 2002 | | | | x |
| Jan. 2003 | x | x | x | |
| Feb. 2003 | x | x | x | x |
| Apr. 2003 | x | x | x | x |
| May 2003 | | | | x |
| June 2003 | | | | x |
| July 2003 | | | | x |
| Oct 2003 | | | | x |
| Dec. 2003 | | | | x |
| Jan. 2004 | | | | x |

*Limit Taken at 400 mg/L

It is obvious from this table that the major problem at this plant is fecal coliforms. As a result, a schedule of compliance for the installation of a disinfection unit will be a part of the renewed permit.

*WASTEWATER CHARACTERIZATION*

This table is based on averages calculated from DMRs submitted for the period November 1, 2000 until January 1, 2004.

Table 1: Wastewater Characterization, Crab Processing Season

| Parameter | Average Concentration |
|---|---|
| Flow | 176,213 gpd |
| $BOD_5$ | 800 mg/l |
| TSS | 198 mg/l |
| O & G | 31 mg/l |
| Fecal Coliforms | 1083 #/100 ml |

This table is based on a averages calculated from DMRs submitted for the period November 1, 2000 until January 1, 2004.

Table 1: Wastewater Characterization, Pacific Whiting (Hake) Processing Season

| Parameter | Average Concentration |
|---|---|
| Flow | 284,718 gpd |
| $BOD_5$ | 996 mg/l |
| TSS | 342 mg/l |
| O & G | 56 mg/l |
| Fecal Coliforms | 599 #/100 ml |

24-Hour composite samples

## PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-base basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC), or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department.

*DESIGN CRITERIA*

In accordance with WAC 173-220-15 (1)(g), flows or waste loadings shall not exceed approved design criteria.

The treatment system was designed to handle average flows of 150 gpm. The estimated production of Pacific Whiting for this design was taken at 350,000 pounds per day, a level of production which has turned out to be frequently exceeded. Nevertheless, and excepting the DNR results form January, February and April 2003, the system can effectively treat the waste load with the exception of removing fecal coliforms. This engineering report proposed that enclosure of the treatment facilities would eliminate bird exposure and control fecal coliform production. This has not proved to be effective.

*TECHNOLOGY-BASED EFFLUENT LIMITATIONS*

The limitations in this permit are based on limits stated in the Federal Register, 40 CFR Part 408, Subpart H, Dungeness and Tanner Crab processing in the Contiguous States Subcategory for crab processing, and Subpart N, Non-Alaskan Mechanized Bottom Fish Processing Subcategory for pacific whiting processing. The fecal coliform limits are presumed to be "all known available and reasonable" technology-based limits based upon the requirements set forth for municipal permits.

*SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS*

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL). There is no present WLA for Grays Harbor.

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect

human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The state of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity. WET testing under the previous permit showed no risk associated with this site.

MIXING ZONES

The Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Grays Harbor which is designated as a Class A receiving water in the vicinity of the outfall. Other nearby point source outfalls include Washington Crab Producers Shellfish Meal Plant and the City of Westport Wastewater Treatment plant. Characteristic uses include:

Water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements for all or substantially all uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

| | |
|---|---|
| Fecal Coliforms | 100 organisms/100 mL maximum geometric mean |
| Dissolved Oxygen | 8 mg/L minimum |
| Temperature | 18 degrees Celsius maximum or incremental increases above background |
| pH | 6.5 to 8.5 standard units |
| Turbidity | less than 5 NTU above background |
| Toxics | No toxics in toxic amounts (see Appendix C for numeric criteria for toxics of concern for this discharge) |

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has examined the potential for contaminated sediments at this site. The process for determining this potential screens the risks by eliminating further analysis if:

1. The discharge is fresh water to salt water (it is).
2. Has received secondary wastewater treatment (it has ).
3. Discharges to an area with a tidal velocity of more than 1cm/sec (velocity is greater than 28cm/sec).

Since there are no toxic substances in the wastewater, sediment evaluation was not required.

*COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED September 14, 2000 the permit Modification issued on May 30, 2003.*

The limits that are common to the existing and proposed permit are identical.

## MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past

compliance, significance of pollutants, and cost of monitoring.

*LAB ACCREDITATION*

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.*

## OTHER PERMIT CONDITIONS

*REPORTING AND RECORDKEEPING*

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-220-210).

*SOLID WASTE PLAN*

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop a solid waste plan to prevent solid waste from causing pollution of waters of the state. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

*TREATMENT SYSTEM OPERATING PLAN*

In accordance with state and federal regulations, the Permittee is required to take all reasonable steps to properly operate and maintain the treatment system (40 CFR 122.41(e)) and WAC 173-220-150 (1)(g). An operation and maintenance manual will be submitted as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). It has been determined that the implementation of the procedures in the Treatment System Operating Plan is a reasonable measure to ensure compliance with the terms and limitations in the permit.

*GENERAL CONDITIONS*

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

## PERMIT ISSUANCE PROCEDURES

*PERMIT MODIFICATIONS*

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

## *RECOMMENDATION FOR PERMIT ISSUANCE*

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five years.

## REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.

## APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on March 21, 2004 and March 28, 2004, in *The Daily World* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on November 2, 2004, in *The Daily World* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility'' proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6285, or by writing to the address listed above.

This permit and fact sheet were written by Gary Anderson, P.E.

## APPENDIX B--GLOSSARY

**Acute Toxicity**--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

**Ambient Water Quality**--The existing environmental condition of the water in a receiving water body.

**Ammonia**--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Best Management Practices (BMPs)**--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**$BOD_5$**--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The $BOD_5$ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass**--The intentional diversion of waste streams from any portion of a treatment facility.

**Chlorine**--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

**Chronic Toxicity**--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

**Class 1 Inspection**--A walk-through inspection of a facility that includes a visual inspection and some examination of facility records. It may also include a review of the facility's record of environmental compliance.

**Class 2 Inspection**--A walk-through inspection of a facility that includes the elements of a Class 1 Inspection plus sampling and testing of wastewaters. It may also include a review of the facility's record of environmental compliance.

**Clean Water Act (CWA)**--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

**Composite Sample**--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

**Construction Activity**--Clearing, grading, excavation and any other activity which disturbs the surface of

the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

**Critical Condition**--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

**Daily Maximum Discharge Limitation**--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.
**Dilution Factor**--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction.

**Engineering Report**--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Fecal Coliform Bacteria**--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

**Grab Sample**--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

**Industrial Wastewater**--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Mixing Zone**--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (chapter 173-201A WAC).

**Monthly Average Discharge Limitation**--The average of the measured values obtained over a calendar month's time.

**National Pollutant Discharge Elimination System (NPDES)**--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

**pH**--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**State Waters**--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

**Stormwater**--That portion of precipitation that does not naturally percolate into the ground or evaporate,

but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit**--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Suspended Solids (TSS)**--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Upset**--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

**Water Quality-based Effluent Limit**--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

## APPENDIX C-OCEAN GOLD SEAFOOD

Crab Season- DMR Tabulation

| Parameter | Unit | | |
|---|---|---|---|
| BOD, 20-DAY (20 DEG. C) | MG/L | 475 | 1-Dec-00 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 720 | 1-Jan-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 380 | 1-Feb-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 170 | 1-Mar-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 370 | 1-Jan-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 370 | 1-Feb-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 645 | 1-Mar-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 1020 | 1-Dec-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 1190 | 1-Jan-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 2630 | 1-Feb-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 400 | 1-Mar-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 1400 | 1-Dec-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | 627 | 1-Jan-04 |
| Average | | 799.76923 | |

| | | | |
|---|---|---|---|
| COLIFORM, FECAL | #/100 ML | | 1-Dec-00 |
| COLIFORM, FECAL | #/100 ML | 2 | 1-Jan-01 |
| COLIFORM, FECAL | #/100 ML | 2 | 1-Feb-01 |
| COLIFORM, FECAL | #/100 ML | 2 | 1-Mar-01 |
| COLIFORM, FECAL | #/100 ML | 1600 | 1-Jan-02 |
| COLIFORM, FECAL | #/100 ML | 1600 | 1-Feb-02 |
| COLIFORM, FECAL | #/100 ML | 11 | 1-Mar-02 |
| COLIFORM, FECAL | #/100 ML | 50 | 1-Dec-02 |
| COLIFORM, FECAL | #/100 ML | 2 | 1-Jan-03 |
| COLIFORM, FECAL | #/100 ML | | 1-Feb-03 |
| COLIFORM, FECAL | #/100 ML | 50 | 1-Mar-03 |
| COLIFORM, FECAL | #/100 ML | 1600 | 1-Dec-03 |
| COLIFORM, FECAL | #/100 ML | 1600 | 1-Jan-04 |
| Average | | 1083.3333 | |

Crab Processing, DMR Tabulation

| | | | |
|---|---|---|---|
| FLOW | GPD | 20000 | 1-Dec-00 |
| FLOW | GPD | 9000 | 1-Jan-01 |
| FLOW | GPD | 241000 | 1-Feb-01 |
| FLOW | GPD | 156000 | 1-Mar-01 |
| FLOW | GPD | 189000 | 1-Jan-02 |
| FLOW | GPD | 189000 | 1-Feb-02 |
| FLOW | GPD | 13775 | 1-Mar-02 |
| FLOW | GPD | 345000 | 1-Dec-02 |
| FLOW | GPD | 437000 | 1-Jan-03 |
| FLOW | GPD | 122000 | 1-Feb-03 |
| FLOW | GPD | 187000 | 1-Mar-03 |
| FLOW | GPD | 318000 | 1-Dec-03 |
| FLOW | GPD | 64000 | 1-Jan-04 |
| Average | | 176213.46 | |

| | | | |
|---|---|---|---|
| OIL & GREASE | MG/L | 22 | 1-Dec-00 |
| OIL & GREASE | MG/L | 2 | 1-Jan-01 |
| OIL & GREASE | MG/L | 18 | 1-Feb-01 |
| OIL & GREASE | MG/L | 5 | 1-Mar-01 |
| OIL & GREASE | MG/L | 10 | 1-Jan-02 |
| OIL & GREASE | MG/L | 10 | 1-Feb-02 |
| OIL & GREASE | MG/L | 8 | 1-Mar-02 |
| OIL & GREASE | MG/L | 88 | 1-Dec-02 |
| OIL & GREASE | MG/L | 30 | 1-Jan-03 |
| OIL & GREASE | MG/L | 136 | 1-Feb-03 |
| OIL & GREASE | MG/L | 10 | 1-Mar-03 |
| OIL & GREASE | MG/L | 17 | 1-Dec-03 |
| OIL & GREASE | MG/L | 43 | 1-Jan-04 |
| Average | | 30.692307 | |

Crab Processing, DMR
Tabulation

| | | | |
|---|---|---|---|
| SOLIDS, TOTAL SUSPENDED | MG/L | 111 | 1-Dec-00 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 90 | 1-Jan-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 132 | 1-Feb-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 80 | 1-Mar-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 151 | 1-Jan-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 151 | 1-Feb-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 172 | 1-Mar-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 291 | 1-Dec-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 269 | 1-Jan-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 365 | 1-Feb-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 194 | 1-Mar-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 255 | 1-Dec-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | 316 | 1-Jan-04 |
| Average | | 198.23076 | |

DMR Tabulation, Pacific Whiting

| | | | | |
|---|---|---|---|---|
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1320 | 1-Jun-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 96 | 1-Jul-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 850 | 1-Aug-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 960 | 1-Sep-01 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 315 | 1-May-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 805 | 1-Jun-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1650 | 1-Jul-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1880 | 1-Aug-02 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1620 | 1-May-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1790 | 1-Jun-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1400 | 1-Jul-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 315 | 1-Aug-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 643 | 1-Sep-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 265 | 1-Oct-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 1400 | 1-Dec-03 |
| BOD, 20-DAY (20 DEG. C) | MG/L | MXD | 627 | 1-Jan-04 |
| Average | | | 996 | |

| | | | | |
|---|---|---|---|---|
| COLIFORM, FECAL | #/100 ML | MXD | 21 | 1-Jun-01 |
| COLIFORM, FECAL | #/100 ML | MXD | 110 | 1-Jul-01 |
| COLIFORM, FECAL | #/100 ML | MXD | | 1-Aug-01 |
| COLIFORM, FECAL | #/100 ML | MXD | 9 | 1-Sep-01 |
| COLIFORM, FECAL | #/100 ML | MXD | 500 | 1-May-02 |
| COLIFORM, FECAL | #/100 ML | MXD | 170 | 1-Jun-02 |
| COLIFORM, FECAL | #/100 ML | MXD | 50 | 1-Jul-02 |
| COLIFORM, FECAL | #/100 ML | MXD | 900 | 1-Aug-02 |
| COLIFORM, FECAL | #/100 ML | MXD | 1600 | 1-May-03 |
| COLIFORM, FECAL | #/100 ML | MXD | 1600 | 1-Jun-03 |
| COLIFORM, FECAL | #/100 ML | MXD | 900 | 1-Jul-03 |
| COLIFORM, FECAL | #/100 ML | MXD | 140 | 1-Aug-03 |
| COLIFORM, FECAL | #/100 ML | MXD | 220 | 1-Sep-03 |
| COLIFORM, FECAL | #/100 ML | MXD | 500 | 1-Oct-03 |
| Average | | | 599 | |

DMR Tabulation, Pacific Whiting

| | | | | |
|---|---|---|---|---|
| FLOW | GPD | MXD | 267000 | 1-Jun-01 |
| FLOW | GPD | MXD | 425000 | 1-Jul-01 |
| FLOW | GPD | MXD | 325000 | 1-Aug-01 |
| FLOW | GPD | MXD | 458000 | 1-Sep-01 |
| FLOW | GPD | MXD | 107050 | 1-May-02 |
| FLOW | GPD | MXD | 124000 | 1-Jun-02 |
| FLOW | GPD | MXD | 251000 | 1-Jul-02 |
| FLOW | GPD | MXD | 75000 | 1-Aug-02 |
| FLOW | GPD | MXD | 83000 | 1-May-03 |
| FLOW | GPD | MXD | 589000 | 1-Jun-03 |
| FLOW | GPD | MXD | 409000 | 1-Jul-03 |
| FLOW | GPD | MXD | 448000 | 1-Aug-03 |
| FLOW | GPD | MXD | 340000 | 1-Sep-03 |
| FLOW | GPD | MXD | 85000 | 1-Oct-03 |
| Average | | | 284717.8 | |

| | | | | |
|---|---|---|---|---|
| OIL & GREASE | MG/L | MXD | 1 | 1-Jun-01 |
| OIL & GREASE | MG/L | MXD | 8 | 1-Jul-01 |
| OIL & GREASE | MG/L | MXD | 260 | 1-Aug-01 |
| OIL & GREASE | MG/L | MXD | 30 | 1-Sep-01 |
| OIL & GREASE | MG/L | MXD | 60 | 1-May-02 |
| OIL & GREASE | MG/L | MXD | 72 | 1-Jun-02 |
| OIL & GREASE | MG/L | MXD | 89 | 1-Jul-02 |
| OIL & GREASE | MG/L | MXD | 8 | 1-Aug-02 |
| OIL & GREASE | MG/L | MXD | 26 | 1-May-03 |
| OIL & GREASE | MG/L | MXD | 89 | 1-Jun-03 |
| OIL & GREASE | MG/L | MXD | 80 | 1-Jul-03 |
| OIL & GREASE | MG/L | MXD | 13 | 1-Aug-03 |
| OIL & GREASE | MG/L | MXD | 43 | 1-Sep-03 |
| OIL & GREASE | MG/L | MXD | 8 | 1-Oct-03 |
| Average | | | 56.21428 | |

DMR Tabulation, Pacific Whiting

| | | | | |
|---|---|---|---|---|
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 468 | 1-Jun-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 79 | 1-Jul-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 419 | 1-Aug-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 342 | 1-Sep-01 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 121 | 1-May-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 462 | 1-Jun-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 561 | 1-Jul-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 155 | 1-Aug-02 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 445 | 1-May-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 670 | 1-Jun-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 538 | 1-Jul-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 313 | 1-Aug-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 121 | 1-Sep-03 |
| SOLIDS, TOTAL SUSPENDED | MG/L | MXD | 91 | 1-Oct-03 |
| Average | | | 341.7857 | |

## APPENDIX D—RESPONSE TO COMMENTS

Comment 1.

The municipal meter formerly used to measure flow has been replaced with a discharge meter on the treatment plant.

Response 1.

True. The permit is modified accordingly.

Comment 2.

The permit limit for fecal coliforms that is used for this permit is taken from municipal practice. Municipal practice is not analogous to fish processing.. Manufacturers of disinfection consulted by Ocean Gold Seafood's consultant agree that there is no "off the shelf equipment" that will disinfect this waste.

Response 2.

The only major difference between municipal waste and this fish processing waste is that fish processing waste is more concentrated. This being the case, additional treatment of the waste might be required before disinfection. Nothing in the regulations requires that "off the shelf" equipment be used.

Comment 3.

Chlorination of this effluent would produce chloramines which are undesirable in the environment.

Response 3.

Dechlorination will remove chloramines from the waste stream. Dechlorination is required of all chlorinated effluents. While chlorine has many disadvantages, fecal coliforms have more disadvantages.

Comment 4.

Pretreatment to make conventional technologies workable would not be possible due to space limitations on the site.

Response 4.

Nothing in the regulations requires that treatment be confined to the site. Production space could be reduced to make room for treatment.

Comment 5.

The schedule of compliance should be modified to make it possible for the permittee's consultant to conduct laboratory tests to determine what would constitute an effective disinfection technique.

The permittee proposes a date of May 1, 2005 for delivery of a study plan to determine what constitutes all known, available and reasonable treatment.

Response 5.

It is not possible to put requirements for a study with a delivery date prior to permit issuance. Ecology would welcome an all known, available and reasonable treatment study as early as possible. As soon as this report is approved and an alternative is selected, the permittee will have 60 days to submit an engineering report in accordance with WAC 173-240.

As soon as this engineering report is accepted, the permittee will have 45 days in which to submit engineering plans and specifications for whatever techniques are required for disinfection of the effluent.

As soon as the engineering plans and specifications are accepted, the permittee has 90 days in which to install the equipment necessary to achieve the permit limits.

Comment 6.

In the table "Monitoring Schedule and Effluent Limitations" the footnote [c] is unclear. What is meant?

Response 6.

The footnote is inappropriate. Unless frequent samples are taken, there is no reason to use geometric means to compute effluent treatment effectiveness. Since sampling frequency is monthly, the footnote is not appropriate ansd has been removed.

Comment 7.

The permit variance language in Special Condition S1.B has been successfully challenged in recent Pollution Control Hearings Board rulings. This language should be altered.

Response 7.

The Department of Ecology, responding to these rulings, has adopted new language for this special condition. This language is shown in the revised permit.

Comment 8.

Condition S2.E should require earlier notice of non-compliance in order to comply with 40 CFR 122.41(l)(6).

Response 8.

The permit has been corrected to include a 24 hour limit for notification of any non-compliance.

Comment 9.

Special Condition S3.A is inadequate and vague.

Response 9.

This deficiency has been corrected.

Comment 10.

Special Condition S3.B.1. In order to comply with 40 CFR 122.41(m)(1)(ii), this permit should include the sentence "Severe property damage does not mean economic loss caused by delays in production."

Response 10.

Sentence included.

Comment 11.

Special Condition S3.B.3. The first sentence is confusing in its use of an incorrect verb form.

Response 11.

This sentence is modified by removing "is" and replacing it with "may be".

Comment 12.

In order to be consistent with 40 CFR 122.41 (m)(2), the phrase to "assure efficient operation" should be inserted after "essential maintenance".

Response 12.

This phrase is inserted.

Comment 13.

Why is the submission of the solid waste control plan not required until October 1, 2005, instead of sooner? The current permit required not only a solid waste control plan be submitted by October 1, 2000, but also required the permittee to submit an update of the plan with the permit application for permit renewal 180 day before the expiration date of that permit. Did the permittee not submit an acceptable plan by October 1, 2000? Did the permittee not submit an updated plan with its application for permit renewal?

Response 13.

Merino's Seafood submitted a revised solid waste control plan on March 19, 2002. This revision was part of the revision to the treatment facilities at the site. The permittee did not submit a revised solid waste plan with his application for permit renewal. This permit will not be issued until a revised solid waste plan is accepted.

Comment 14.

Ecology needs to make or require an AKART determination if one has not been done.

Response 14:

The permittee has requested an AKART determination. See Response Number 5.

Comment 15:

Does General Condition G 10 prohibit the discharge of pollutants removed in the course of treatment other than when in the final effluent stream. Does it prohibit the discharge of pollutants removed during treatment from the holds of boats into which the permittee could load them or the hosing off of such pollutants off the dock into the water?

Response 15.

No. Discharge of liquid pollutants out side the permitted pollutant stream is simply an unauthorized discharge. Disposal of solid wastes removed during treatment is regulated by Special Condition S4 and the required approved solid waste plan. Discharge of gaseous waste (if any) is governed by air pollution regulations. Waste conveyed by boat should be regulated by the solid waste plan or the permit itself unless this waste is conveyed outside the three mile limit. Incidental waste generated by washing off the dock has been observed to be inconsequential.

Comment 16.

To be consistent with 40 CFR 122.41 (n), this condition on upset must require 24 hour notice , not notice as required by condition S3.E. The reference to S4.C makes no sense.

Response 16.

By combining the Special Conditions S1 and S2 without altering G16, the permit numbering system does not correspond to the references in the General Conditions. This has been corrected. See Response 8.